

Binary Search Tree

classmate

Date _____

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// node

```
struct node {
```

```
    int keydata;
```

```
    struct node *right;
```

```
    struct node *left;
```

```
};
```

// creating a node.

```
struct node * create (int data) {
```

```
    struct node *temp;
```

```
    temp = (struct node *) malloc (sizeof (struct node));
```

```
    temp -> keydata = data;
```

```
    temp -> right = temp -> left = NULL;
```

```
    return temp;
```

```
}
```

```
void insert (struct node *root, struct node *temp temp) {
```

```
    if (temp -> data < root -> data) {
```

```
        if (root -> left != NULL)
```

```
            insert (root -> left, temptemp);
```

```
        else
```

```
            root -> left = temp;
```

```
    }
```

```
    else {
```

```
        if (temp root -> right != NULL)
```

```
            insert (root -> right temp);
```

```
            insert (root -> right, temp);
```

```
        else
```

```
            root -> right = temp;
```

```
    }
```

```
}
```

```
void inorder (struct node * root) {  
    if (root == NULL)  
        return;  
    inorder (root -> left);  
    printf ("%d", root -> data);  
    inorder (root -> right);  
}
```

```
void preorder (struct node * root) {  
    if (root == NULL)  
        return;  
    printf ("%d", root -> data);  
    preorder (root -> left);  
    preorder (root -> right);  
}
```

```
void postorder (struct node * root) {  
    if (root == NULL)  
        return;  
    postorder (root -> left);  
    postorder (root -> right);  
    printf ("%d", root -> data);  
}
```